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June 15, 1992

In Reply
Refer To: HW-113

Robert L. Geddes
Senior Environmental Engineer
Monsanto Chemical Company
P.O. Box 816
Soda Springs, ID 83276

Subject: Phase 1 Remedial Investigation/Feasibility Study
Preliminary Site Characterization Report for the
Monsanto Soda Springs Facility

Dear Mr. Geddes:

The purpose of this letter is to acknowledge your timely submission of the Preliminary Site Characterization Summary Report and to transmit EPA's comments on the report to you (please see enclosure). The Report submitted on April 23, 1992 was responsive to the work plan, well-written, and organized in a fashion that was relatively easy to follow in most places. The air pathway/emissions discussions were the most difficult to review and evaluate due to the lack of complete supporting information for the assumptions and conclusions discussed in the report.

General and specific comments to the document are provided on the enclosed pages. The general comments reflect major issues of concern that could affect Phase II planning and development. The specific comments deal primarily with explanation and clarification of particular topics, some of which must be addressed in Phase II planning and some of which merely need to be addressed in future Remedial Investigation (RI) reports.

By this letter, EPA is also proposing a change in the Work Plan in order to keep the project moving and avoid duplication of effort. Rather than have Monsanto revise this preliminary Report, EPA proposes that Monsanto acknowledge and respond to EPA's comments in a memo within three weeks of receipt of these comments and subsequently incorporate any necessary changes in the Phase II Work Plan, during Phase II, and/or in the draft RI report as appropriate. If this is acceptable to you, please acknowledge your agreement with this change in your response letter.

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If you have any questions about this letter or the enclosed comments, please call me at (206) 553-2100 and we can either discuss them at that time or put them on the agenda for our meeting on June 17, 1992.

Sincerely,

Timothy H. Brincefield
Superfund Project Manager

Enclosure

cc: Kevin Oates, EPA Superfund
Charles Ordine, EPA ORC
Christine Psyk, EPA Superfund
Lorraine Edmond, EPA ESD
Don Matheny, EPA ESD
Gordon Brown, IDHW
Mike Thomas, IDHW
Jim Eldridge, SAIC
David Banton, Golder Associates

EPA COMMENTS on the MONSANTO CHEMICAL COMPANY
PRELIMINARY SITE CHARACTERIZATION SUMMARY REPORT

COMMENTS ON THE DOCUMENT IN GENERAL:

1. Evaluation of the vadose zone as part of the pedological investigations was incomplete. It was stated on page 23 (Section 2.5) that the vadose zone beneath potential sources will be evaluated for potential to affect ground water quality. Potentially affected vadose zone areas were not discussed in Section 3.5 nor specifically discussed in Chapters 4 or 5. The report states that the sewage evaporation ponds may affect the ground water quality, and that the old underflow solids ponds affect ground water quality; however, an evaluation of vadose soils in these areas is absent. It is also possible that the ground water may be affected by material or residuals from the old coke and quartzite slurry pond which did not have a liner. Other potentially affected vadose areas should include the Northwest Pond and the active underflow solids stockpile.

The Monsanto Work Plan (page 51) states that vadose zone contribution to ground water quality will be determined from geochemical equilibria evaluations and ground water data with the assistance of certain models. The SCR states that fluoride concentrations have reached equilibrium at the site without providing documentation or supporting information.

Since data obtained during the Phase I investigation suggest that portions of the site contain covered and closed impoundments and that these areas in the vadose zone are potential sources for contaminant loading to ground water, it is recommended that additional evaluation of soils beneath the impoundments be performed during Phase II to determine their contribution to ground water quality.

The types of information necessary for vadose zone evaluation may include detailed discussions of contaminant fate and transport in subsurface soils, distance from the bottom of source areas to the water table, the hydraulic conductivity in soils beneath the impoundments, evapotranspiration rates and the associated aquifer recharge resulting from the infiltration of precipitation, and a few soil samples down to the water table from selected areas.

2. In order to establish common background values for screening purposes for both Soda Springs Superfund sites, EPA directed Monsanto and Kerr-McGee to each take 3 off-site background samples from agreed-upon locations and then to use the data from all six locations to establish background. The SCR report includes only the 3 samples taken by Monsanto. For Phase II, Monsanto should add the additional 3 data points and re-evaluate which analytes are elevated with respect to background. The Work Plan should include

a chart showing, at a minimum, the range, mean, and standard deviation of background samples (n=6, the same 6 samples used by Kerr-McGee) alongside the range, mean, and standard deviation of site samples. In addition, several methods of comparison between background and site concentrations should be shown.

EPA is not convinced that the RCRA UTL approach used in the SCR is the appropriate statistical method to evaluate elevation with respect to background at this Superfund site. EPA does not recommend or have a single approved statistical method for this type of screening at Superfund sites. Rather, EPA prefers to use several different standards for comparison, such as the background mean, the mean plus 1 or more standard deviations, and/or broader regional values, in order to accurately screen for elevation with respect to background. EPA has no objection to the UTL method being one of the comparisons used by Monsanto, but others should be used as well (for example, Kerr-McGee used the background mean plus two standard deviations was used as one comparison value and a very broad "western U.S." concentration range as a second comparison).

3. The rationale for selection of background ground water wells was incomplete or confusing. For example, Well TW-02 was selected as a background well even though some of the constituents in the ground water at this location have historically exceeded risk-based levels. In addition, the concentration of zinc in this well was excessive compared to the other background wells. The selection of these wells should be reconsidered as decisions are made for Phase II, and whatever decisions are made should be more fully documented in the Draft RI.

4. The screening tables used to identify elevated constituents in the ground water (Tables 4-14 and 4-15) used only the maximum filtered concentrations. While filtration of ground water samples provides useful information for understanding chemical transport within an aquifer, it is critical to measure the chemical concentrations as they relate to potential exposure. Large differences in constituent concentrations (up to 3 orders of magnitude higher) exist between unfiltered and filtered samples.

Risk Assessment Guidance for Superfund (RAGS) recommends an adequate evaluation of such differences, prior to identification of potential contaminants of concern based on filtered data since it cannot be assumed in future exposure scenarios that all ground water consumed will be filtered with a 45 μm filter. In order to assist with preparation of the Risk Assessment, Monsanto must provide EPA with such an evaluation during Phase II.

5. The Mead Thrust Aquifer System is not adequately addressed in this report. At least five Monsanto Wells with elevated levels of constituents occur in this system, along with several off-site springs. An understanding of the vertical and horizontal contaminant plume in this system, especially in the eastern portion

of the Monsanto site, is necessary to evaluate potential remedial actions that may be necessary. Since the Mead Thrust Aquifer System mixes with the Shallow Ground Water Zone (as described on page 63) and the Lewis Well has elevations of chemicals similar to plumes emanating from both the Monsanto and Kerr-McGee sites, further evaluation of this aquifer is warranted. A "regional" approach to characterizing the plume in this system may be necessary through joint information sharing and gathering from both Monsanto and Kerr-McGee. The Phase II Work Plan should address how the Mead Thrust Aquifer will be more thoroughly characterized in Phase II in order to complete the RI.

6. It was stated in various sections of the report that characterization the UBZ-2 zone south of the Plant is inadequate and further information is required. The Phase II Work Plan must include plans to further characterize plumes migrating off-site through activities such as the installation of wells south of the Plant, aquifer testing, and chemical sampling. Data should also be collected to determine influences of the fault structures on ground water flow south of the Plant.

7. The SCR presents a limited assessment of air quality impacts from the site. The report evaluated TSP and PM10 impacts along with an incomplete assessment of fluoride and cadmium impacts from the site. As indicated in section 6.2.2.1 of the report, additional site characterization must be done in Phase II to identify applicable sources and constituents of concern and to determine the significance of the air pathway at the site.

8. Tracking the numerous assumptions, data, and calculations involved with the air pathways and air transport analyses presented in Sections 5.3.1 and 5.3.2, respectively was very difficult. In addition, since much of the supporting information that Golder Associates and SENES Consultants used apparently was derived from material and personal communications from Mr. Don Wind (Memorandum in Appendix A), the quality of the data used is unknown. Several examples illustrate these points:

> Many of the emissions estimates from certain sources or source areas used in the dispersion modeling analysis are significantly lower than the estimates used in earlier work conducted in 1988 (e.g. nodule crushing area and slag pile). Unfortunately, much of the data needed to support such changes are lacking in this submittal.
>
> The concentrations of cadmium and fluoride used in the TSP fraction emission rates are not provided in the Appendices for review. The concentrations and moisture content data used on pages 141 and 142 are apparently based on unverified 1990 data, which differs from some of the RI/FS data in Appendix B. Similarly, the percent silt contents for the active storage piles presented on page 145 conflict with the RI/FS data in

Table 3-2.

The nodule crushing/screening scrubber outlet emissions was not discussed on page 133; however, Table 5-1 and a memo in Appendix A indicate emissions to be 9.7 lbs/hr. In addition Table 5-1 does not calculate fluoride apparently due to lack of data. However, on page 141, the fluoride concentration in nodule fractions was given as 0.00715. (The cadmium value was the same on page 133 and 141).

The cadmium and fluoride fractions used in the calculations of baghouse emissions were not provided in Section 5.3.1.2.

The control or collection efficiencies of the various scrubbers, baghouses, and other fugitive dust collection operations appear to represent peak efficiencies and thus somewhat optimistic. Supporting data should be provided.

It is unclear why Tables 5-16 and 5-20 do not have numerical values for predicted cadmium concentrations in the air resulting from nodule reclaim and slag dumping operations, even though data is available for the calculations involved.

This background needs to be provided to EPA as soon as possible, preferably with the addition of the most recent (1991) data (see Specific Comment #3), to allow EPA to evaluate Phase II proposals. The air pathways discussions in the RI report will have to be much more thoroughly documented.

9. Rationale should be provided in the Phase II Work Plan for the elimination of other constituents in the evaluation of air quality. Phase II investigations should include any recent stack sampling results, and air modeling should be performed on those constituents of concern that were identified in off-site soils. In addition, further evaluation of emissions emanating from the nodule reclaim area and the slag dumping operations should be conducted during Phase II.

10. The SCR air analysis estimates only ambient air concentrations available for the inhalation exposure pathway. There is no way of estimating potential chemical deposition associated with current or past operating practices. While the presently planned soil sampling effort will provide information related to the deposition of site-related emissions, it may prove necessary to distinguish between those materials deposited from past practices and those attributable to current operations. If sufficient information is not otherwise available to characterize the site, deposition modeling should be conducted to evaluate the amounts of emitted constituents of concern deposited on soil/vegetation surfaces in the vicinity of the site. Deposition modeling may also provide a means of evaluating the fluoride-in-vegetation monitoring reports of 1985 through 1988, as they relate to emissions generated at the

site.

11. The SCR report fails to address any air quality-related impacts (e.g. fluoride and cadmium emissions) associated with past operating practices at the site. This issue must be considered during planning for Phase II and, at a minimum, will need to be addressed thoroughly in the draft/final RI. If processes/practices have changed during the history of operation, then such changes should be evaluated to determine their potential contribution to elevation of constituents of concern in off-site soils.

COMMENTS ON SPECIFIC PAGES:

1. Page 39, Section 3.2.1: The modeling described in the SCR was based on one year of meteorological observations collected during 1990. As data from 1991 are now available, an analysis of 1990 and 1991 meteorological data should be performed and presented to EPA as soon as possible, and should be documented in the draft RI. This analysis should include a discussion as to how the variability and seasonality of the data may affect emission estimates.

2. Page 41, Paragraph 5: The modeling analysis employs mixing height data gathered at Boise. Upper air data collected at Salt Lake City (SLC) would have been more appropriate for use because SLC is physically closer to Soda Springs than Boise, and more importantly, SLC and Soda Springs are closer in elevation than are Soda Springs and Boise. For ongoing work at similar sites in Pocatello, ID, EPA has approved the use of SLC data for modelling. EPA recommends that Monsanto use mixing heights from SLC in any future modeling analyses.

3. Page 58, Section 3.6.2.1. A review of the well logs and historical data indicates that the role of the faults and the transmissivities of flows and interflow zones should be more accurately defined. The results of the aquifer testing done in 1984 are equivocal. For several of the tests it was noted that there was no measurable drawdown in observation wells when PW2 and PW3 were pumped. Several possible explanations were noted for the lack of drawdown observed: an anisotropic ground water system, a hydraulic barrier or the steeply sloping water table preventing full propagation of the cone of depression (Golder, November 1985). Furthermore, four of the wells on which the aquifer testing was performed were found to have poor seals, compromising the results. Only two of the 10 wells tested were screened completely in the basalt. It should also be noted that the well with the highest transmissivity was screened in the LBZ; however, it was one of the wells abandoned because of the poor seal.

It appears there is insufficient data to confirm the assertion that the faults act as barriers to flow and that there is no hydraulic connection between the UBZ and LBZ. More extensive hydraulic

testing done by Kerr-McGee found that the conductivity of the flows and interflow zones was similar. This issue must be more fully addressed in the draft RI. As part of Phase II, Monsanto should propose whatever additional work is necessary to more accurately define the characteristics of the aquifer, especially south of the Plant (See general comment #5). This could include performing additional pump tests, installing some new wells screened in the basalt flows and in the interflow zones, or some alternative means of addressing this data gap.

4. In Table 3-15, well TW-29 was placed in the sodic water group; however, it has a Ca/Mg ratio greater than one, unlike the other wells listed and substantially lower bicarbonate and specific conductance values. Nitrate/Nitrite as N is much higher than other "sodic" wells and springs. These values are closer to the "fresh" wells than the sodic. TW-28 also has a Ca/Mg ratio greater than one, but other parameters are similar to the "sodic" wells. Since these wells are also used as background sodic wells. These issues should be considered during Phase II planning and if no changes are made, Monsanto should provide further clarification for why these wells were placed in the sodic system in the draft RI.

5. Page 63, paragraph 2. It is stated that TW-10 water is sodic water with recent infiltration from fresh water accounting for the young age (among the youngest tested) and elevated tritium levels. However, oxygen-18 and deuterium values are almost identical to those for Doc Kackley and Hooper Springs which are sodic water only. Since review of the general chemistry of TW-10 shows that it does not fit the "sodic" water profile, Monsanto should provide an explanation for the variance in some parameters and not in others in the draft RI.

6. Page 64 Ground Water Flow Characteristics, UBZ-5
The report states that "based on existing hydrogeologic information, Ledger Spring is not downgradient of any potential sources at the Monsanto Plant, and based on age-dating is not threatened by plant activities." This is an important conclusion which must be discussed in more detail in the next RI report and more explicitly connected to the hydrogeologic information to which it refers.

7. Page 68 Ground Water Use
The report refers to a former drinking water well at KMCC that is now abandoned. It was my understanding that KMCC formerly used their production well as a drinking water well, then later connected to the Soda Springs City water supply. The final RI Report should include a figure outlining the zone subdivisions (LBZ 1-4, UBZ 1-4).

8. Page 82 A benchmark of 0.5 Hazard Index is used as a primary screening criterion. This assumes that there are no other pathways for those contaminants. Region X guidance uses a Hazard Index of

0.1 for screening when other potential pathways exist. This should be reevaluated during Phase II planning and discussed in the RI report.

9. Page 87, Section 4.4.2. The screening procedure used for constituents of potential interest is human health risk-based and does not necessarily reflect ecological risk-based levels to plants and wildlife. This should be clearly documented in the RI report.

10. Page 88 and 89. An RF factor is given as a multiplier of the air particulate data to obtain the "respirable fraction". The toxicological assumption that 25 percent of the TSP is retained in the lungs is debatable. EPA guidance suggests the collection of PM-10 data for assumptions regarding the respirable fraction. The air pathways and air transport analyses modeled PM-10 levels for cadmium and fluoride. The recommendation for sampling of particulates from the IDHW stations in Phase II may provide information of TSP and PM-10 levels. If not, Moinsanto should propose an alternative method to collect the necessay information.

11. Page 91 Ground Water Quality
When discussing the interpretation of data from filtered samples, the report states that "a filtered sample... overestimates the dissolved constituent in a water medium as ... about half of all colloidal particles present (i.e., those less than 45 mm in size) are represented in the sample." One of the objectives of looking at data from filtered samples is to evaluate the fraction of the constituents that is mobile in ground water. Because filtering removes some of the colloidal particles, it may result in an underestimate of the mobile fraction. The relevant section of the Draft RI should discuss both sides of the filtered/unfiltered question.

12. Table 4-10. Noncarcinogenic Reference Doses. Several RfDs in this table are incorrect, including:

The RfDs for chromium (III) and chromium (IV) are 10 and 200 mg/kg/day, respectively, as reported in the HEAST Tables. Golder references last year's HEAST Tables, and reports an unspeciated chromium RfD of 1.0 mg/kg/day.

The report assigns an inhalation RfD (noncarcinogenic) of 0.0001 mg/kg/day for manganese. The current HEAST tables report it as 0.0004 (Four times higher).

For cadmium, the SF is given as 6.3 mg/kg/day in this table, but the value from HEAST is given as 6.1 mg/kg/day.

Monsanto should review the RfD values and factor the correct values into planning for Phase II. A corrected table should be provided in the RI.

13. Table 4-16. Nitrate/Nitrite (as total N) is given an RfD value of 1.6 (Reference is listed as IRIS), but the HEAST Tables list the same parameter as a value of 0.1, which is 1/16 of the value listed by Golder. Monsanto should review this RfD and factor the correct value into planning for Phase II. A corrected table should be provided in the RI.

14. Page 96, paragraph 1. Manganese, chloride, and sulfate were eliminated from further consideration even though these constituents frequently exceeded drinking water standards (SMCLs). Monsanto should reconsider these constituents during Phase II planning and at a minimum, a discussion of the frequency and magnitude of such exceedances of SMCLs and how they may affect human health should be included in the RI.

15. Page 108, paragraph 4. The inhalation of off-site particulates from Plant emissions may not necessarily overwhelm the inadvertent ingestion of off-site soils without an analysis to determine the incremental exposures from each pathway. This increment will be examined in the risk assessment process.

16. Page 111, paragraph 3. Ground water could potentially be used for stock watering purposes and thus represent a potential biotic pathway. This will be evaluated during the risk assessment and should be mentioned in the RI report.

17. Pages 132 and 133: Percent fractions of TSP for several sources are presented. It is difficult to determine whether these are TSP fractions of total particulate emissions or if they are PM_{10} fractions of estimated TSP emissions. Review of the references identified did not clarify what those values represent. This should be clarified in the draft RI.

18. Page 135, paragraph 4: The technical basis for the factor used to estimate emissions from slag dumping is not well substantiated in the report. The 0.026 lb/ton TSP emission factor is intended to represent the loading of cooled, broken slag into trucks with front end loaders. This factor does not appear appropriate for estimating emissions released when molten slag is poured. The technique employed in 1988 appears to more reasonable, as it incorporates a slag pouring factor directly, and adjusts this factor to account for pouring outside of the building. The discussion indicates that modeling using the 1988 emissions estimation approach resulted in predicted concentrations at the Harris Ranch site from slag dumping alone which exceeded the observed effects from all Monsanto sources and therefore that approach was inappropriate. It is not clear how the "observed effects" from all Monsanto sources was determined. An emission factor appropriate for the slag pouring process should be used in future modeling analyses, and this discussion needs to be clarified in the draft RI.

19. Page 136, Paragraph 5: The report identifies two emission factors for fluoride emissions from slag pouring; one from an EPA report and another "published" factor. The "published" factor (which is used in this analysis) results in emissions which are significantly lower than earlier 1988 estimates. The "published" factor is referenced with a citation of the missing (or non-existent) April 18, 1990 memo discussed above. The appropriateness of this factor cannot be determined without suitable documentation.

20. Page 138, paragraph 1. The report claims that the ASA (1990) emissions test results are not reliable for estimating emissions from the reclaim hopper. Unfortunately, the ASA report is not included to substantiate this claim. The technique used in this analysis results in significantly lower emissions than indicated by ASA.

21. Page 141 & 144: Particle size distributions other than ≤30 μm (fraction 0.74) were collected for phosphate ore, treater dust, baghouse dusts, underflow solids, and slag (Appendix B); however, only the 0.74 fraction was used in the equations on page 141 and 144 for all calculations. Further clarification should be provided.

22. Page 142 and 143: The unpaved roadway dust emissions equations contain an incorrect factor to account for precipitation. The correct factor ((365-p)/365) should be used in the RI report.

23. Page 145, paragraph 3: Windblown dust emissions from storage piles are reduced by a factor of 120/365 to account for snow cover during the winter. Application of this factor appears to result in some double-counting of reductions since the precipitation factor contained in the equation embodies snowfall as well as rain. A more appropriate adjustment factor should be incorporated into future analyses.

24. Page 147: The dispersion modeling failed to address impacts resulting from complex (and intermediate) terrain. Because the site is situated in the vicinity of significant terrain features, during Phase II and in the RI impacts (particularly from point sources) should also be evaluated using appropriate complex terrain modeling techniques.

25. Table 5-11: This table shows that emissions from roads rank third (28.5 tons/year TSP). Concentrations of cadmium and fluoride were not measured directly. However, since the majority of road emissions are from the slag, quartzite, and ore haul roads, conservative estimates could be made by using the concentrations in the source material dusts. These calculations should be made and incorporated in the analysis.

26. Page 146, paragraph 3. In order to narrow the uncertainty of emission rates, it could be assumed that the kiln spray tower and

the kiln venturi scrubbers operate at the same rate as furnace #7 or at average furnace hours of operation (7,936 hours), rather than 8,760 hours per year.

27. Page 154, paragraph 5. An explanation should be provided as to why maximum fugitive emissions and resultant concentrations from Groups 2, 3, and 4 would only occur under neutral (Class D) conditions.

28. Page 170, paragraph 6. It is stated that elevations of constituents in the lower basalt zone is due to communication caused by poor well construction at Wells TW-3 through TW-6. However, this does not account for the elevated levels (relative to background) recorded in wells in the center of the site, upgradient to Wells TW-3 through 6. Although contaminant levels have been decreasing in this area since the wells were grouted out, the metal and other inorganic compound concentrations are still the highest in the area of Wells TW-5 and TW-6 (page 59). The report states that ground water velocity in the LBZ ranges from 0.6 to 30 feet per day. If the wells were grouted out and the source removed at the end of 1986, the plume should have moved at least 10,950 feet downgradient from the source. The continued presence of elevated metals and inorganics in the LBZ suggests there may be a connection between the UBZ and LBZ and/or residuals remain. This must be considered during Phase II planning and addressed in the RI report.

29. Table 2-8. In the RI report, an explanation of the partially canceled parameters should be provided in the legend.

30. Appendix C, Table C-1. The units should be changed to mg/kg in the RI report.

31. Appendix K. Since Kerr-McGee developed a similar well inventory, it is encouraged that data be shared for a comprehensive listing and verification of area wells.

32. Page 173. Source Investigation.
EPA concurs that additional source investigations are necessary to complete site characterization. Based on the SCR and our meeting on May 21, 1991, EPA understands that Monsanto is proposing to take additional samples from the potential source areas listed and analyze them for elevated constituents found in off-site soils plus cadmium and fluoride. This seems appropriate given the available information, but EPA is unable to determine at this time whether this will provide all necessary information to complete the air pathways analysis absent the supporting information discussed in General Comment #8. Monsanto should include plans for the additional source investigations in the Phase II Work Plan.

33. Page 173. Meteorological Investigation
EPA concurs that 1991 meteorological data needs to be added to supplement the 1990 data and that additional modelling needs to be

done following the additional source characterization work. This analysis should include a discussion as to how the variability and seasonality of the data may affect emission estimates. Constituents of concern in off-site soils should be correlated with current source modelling; and, the influence of historical release contributions to the elevated levels of constituents of concern in soils should be evaluated.

34. Page 173. Surface Hydrological Investigation
EPA concurs that additional sampling of Soda Creek sediments will help determine the extent of the constituents of concern. Phase II investigations must also evaluate the suspected pathways that result in elevated constituents in the sediments.

35. Page 173. Geological Investigation
While it may be true that additional direct geological investigation is not required at this time, the geologic model in the RI report must be refined utilizing data from the Phase I investigation at Kerr-McGee and from data collected from Phase II off-site investigations. Development of a regional conceptual geologic model using this information would be useful as remedial alternatives are developed.

36. Page 173. Pedological Investigation
EPA concurs that the areal extent of constituents of potential interest in off-site soils needs to be further defined and characterized. Phase II investigations should attempt to correlate the areal extent of constituents of concern with potential current and past releases from source areas. The focus of the activity should be in those areas where the greatest potentials for exposures may exist. Elevated levels of constituents in soils south, southeast, and northeast of the site were detected in the Phase 1 SCR. Air modelling data presented in the SCR also indicate elevated levels of constituents are to be expected south of the site. Consequently, Monsanto must include plans to investigate soils south and east of the facility in Phase II.

37. Page 173. Hydrogeological Investigation
EPA agrees that additional assessment of the plume observed in UBZ 2 needs to be defined beyond the facility boundary EPA also concurs that Monsanto should include Kerr-McGee data in order to develop a more regional conceptual hydrogeological model. However, Monsanto also needs to address the role of the Mead Thrust Aquifer system per General Comment #5. Additional characterization of the role of the faults, flows, and interzone flows should also be examined per Specific Comment #3.

38. Page 173. Ecological Investigation
While EPA agrees with these recommendations, it will also be necessary to identify and evaluate potential environmental pathways and receptors exposed to constituents of concern in off-site soils.